RADIATION PROTECTION IN MEDICAL EXPOSURE (ISR/9/007) I1 New

MODEL PROJECT

CORE FINANCING

YEAR	Experts		Group Activity	Equipment	Fellowships		Scientific Visits		Group Training	Sub-Contracts	Misc. Comp.	TOTAL
	m/d	US $	US $	US $	m/d	US $	m/d	US $	US $	US $	US $	US $
1999	1/0	14,700	0	40,000	1/0	3,450	0/14	5,040	0	0	0	63,190
2000	0/14	7,210	0	60,000	0/0	0	0/0	0	0	0	0	67,210

First Year Approved: 1999

OBJECTIVES: To strengthen the national centre for radiation protection in order to provide training, demonstration and QA of nuclear medicine imaging equipment.

BACKGROUND: In Israel, the QA programme for diagnostic radiology is limited, with infrequent and incomplete performance checks periodically carried out by a technical team of the Ministry of Health. There is a lack of facilities, technical knowledge and awareness of radiation protection in medical radiology establishments, and no national legal framework for the protection of patients undergoing medical imaging procedures. QA and performance checks of diagnostic radiology equipment are carried out extensively only in connection with mammography screening programmes, but not for other diagnostic radiology equipment. It is, therefore, essential to build up a team of specialists in QA-QC in order to provide advice to medical radiologists on radiation risks originating from radiology applications and to help establish accredited QC services for diagnostic radiology. The Radiation Protection Division in the Soreq Nuclear Research Centre (NRC), the national centre for radiation protection in Israel, has initiated a study of the general problems related to the radiation protection and QA programme of diagnostic X-ray equipment. Project ISR/9/005 helped to create the basic theoretical and technical infrastructure for patient protection in diagnostic radiology and QA of medical imaging X-ray equipment. As the next step, a survey was initiated with the support of the Ministry of Health to assess the state of radiation protection in Israeli hospitals. It has been decided, as a result, to establish facilities for training and QA at the national centre in support of the required health legislation.

PROJECT PLAN: The project will be managed by the Radiation Protection Division of the Soreq NRC, with the co-ordination and co-operation of the Israeli Ministry of Health, the Israeli Atomic Energy Commission (IAEC), and the National Commission on Medical Imaging. The Ministry of Health will also co-operate in the design of the courses in the training centre, provide the framework for the use of other major medical facilities in hospitals, support research activities related to radiation protection, and identify medical experts for training in radiation protection and QA programmes. The two-year programme will cover: a) completion of QA-QC in nuclear medicine and X-ray radiology, and the establishment of national QA-QC standards; b) establishment of local QA committees in 25 Israeli hospitals, and the training of medical and maintenance staff in QA and radiation protection of patients, and partial implementation of the national standards; c) full implementation of the QA standards in Israel, including periodic test procedures performed by local technicians and by external teams, and the adaptation and establishment of a proper supervision and control mechanism.

NATIONAL COMMITMENT: The IAEC and the Ministry of Health fully support the creation of a national radiation protection infrastructure, including a QA-QC programme for radiology equipment. Necessary technical staff and financial resources of about US $1 million will be contributed by the Ministry of Health. Extrabudgetary funds will be provided for the purchase of some equipment.

AGENCY INPUT: Expert services; training; essential equipment for training, demonstration and QA of nuclear medicine.

PROJECT IMPACT: The project will lead to the establishment of a national QA programme in nuclear medicine, and an accreditation system for QA services for medical imaging equipment. This will improve radiation protection for patients and increase public confidence in medical radiological services.